

The Need for Storage and the Role of the Private Sector

A Presentation to the
Alternative Source Subcommittee
of the
Eastern Virginia Groundwater Advisory Committee

Changes Since the Time of the King William Reservoir Project

National recognition of need for water supply projects

- California
- Florida
- Texas
- Colorado
- Georgia

Changes Since the Time of the King William Reservoir Project

State water supply planning process

- Need to diversify
- Need for storage

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Changes Since the Time of the King William Reservoir Project

Change in Priorities

- Permitting
- Perception

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Changes Since the Time of the King William Reservoir Project


Understanding of Need

- State of the Aquifer
- Expected Reductions in Groundwater Withdrawals

Understanding of Demand

- Changing Customer Base (Human Consumption Decreasing)
- Economic Growth
- Greater Emphasis on Environmental Protection

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Changes Since the Time of the King William Reservoir Project

Role of Storage

- Drought
- Contamination
- Contingency Planning
- Water Security

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Changes Since the Time of the King William Reservoir Project

- Increasing Role of the Private Sector
- Recognition of Benefits of Partnerships
- Trading
- Private Investment in Natural Resource Infrastructure Development
- Private Investment to Mitigate for Loss of Natural Resources

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Project Team

- Chesapeake Bay Nutrient Land Trust
- Restoration Systems
- Combined Efforts Include 65 Projects Across 9 States
- Achieved Cooperative Federal, State and Private Environmental Solutions
- Advanced Ecological Systems Experience in Water Resources, Wetland, Stream, Water Quality, Riparian Buffer, Species Conservation, Nutrient Banking, and Reservoir Projects

**Willingness and Expertise to Invest in
Natural Resource Solutions**

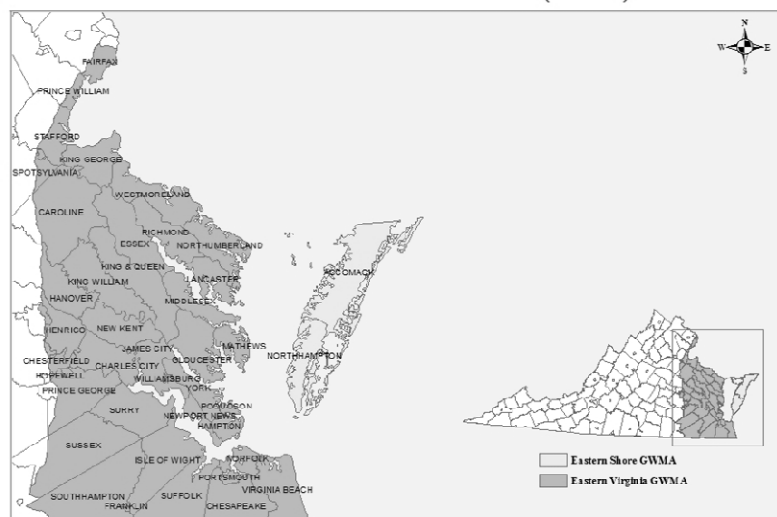
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Eastern Virginia Specific Needs

- Alternative Sources
- Greater Storage
- Identification and Preservation of Sites to Meet Future Need
- Plan that Includes Multiple Solutions
 - Large Scale
 - Small Scale
 - Immediate
 - Long Term

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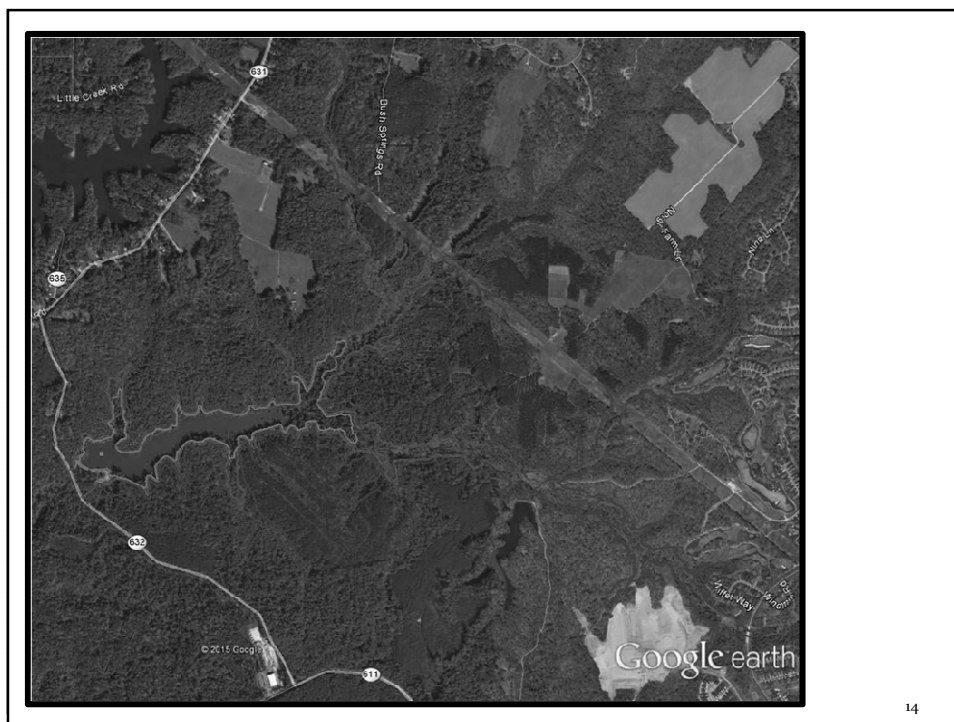
COMMONWEALTH OF VIRGINIA GROUNDWATER MANAGEMENT AREAS (GWMA)



Effective: January 1, 2014
Prepared By: Virginia Department of Environmental Quality
Groundwater Withdrawal Permitting Program



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Cranstons Mill Pond

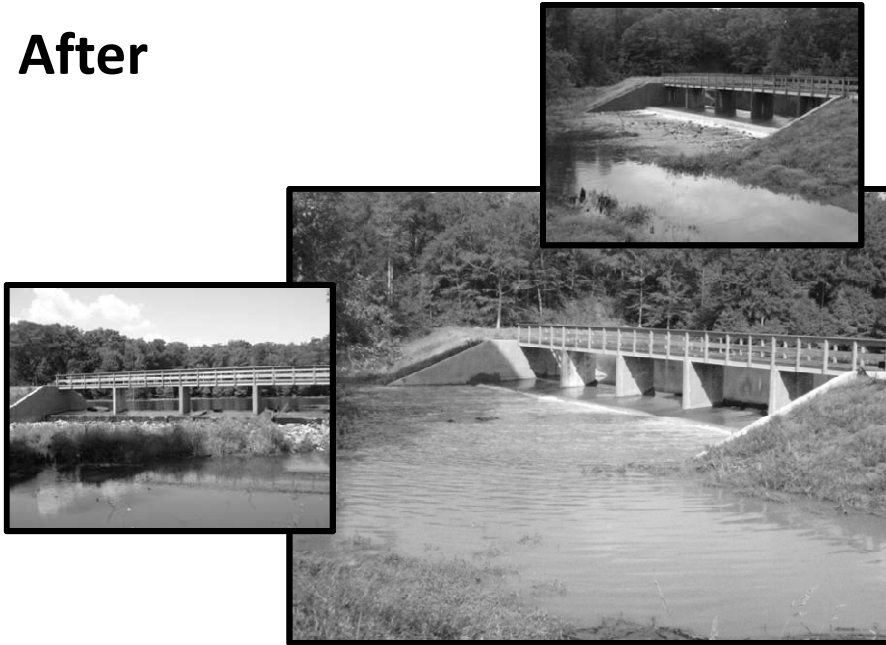
- Privately Owned
- Federal, State, and Local Permits Obtained in 2009
- Regulated DCR Dam
- 55 +/- Impounded Surface Acres; Additional Operational Area of 8 Acres
- Won “Most Improved Dam” Award at the Virginia Lakes and Watershed Association Conference in 2013
- Providing Private Market-Based Regional Water Resource Benefits

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Before



After



Cranstons Mill Pond

- Unique Geologic Position
- One of the Few Remaining Undeveloped Watersheds (= Clean Water)
- No Upstream or Downstream Flow Impacts
- Tidal at Base of Dam
- Average Daily Flow is ~10 MGD (Sufficient to Fill the Gap Caused by Proposed Cuts); Significantly Greater Storage Capacity
- Proximity to Little Creek

Cranstons Mill Pond

- Regional Landscape Position Offers a Natural Fit in the Region's Water Storage Corridor
- Natural Storage Capacity is Significant Due to Landscape Conditions, and Unique Topographic Setting
- Storage Capacity Grows Exponentially with Minimal Changes to Dam

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How Does this **Fit** into the Work of the Subcommittee?

- Identification of Options
 - Recommendations
 - Prioritization
- Preservation of Future Options
- Provides for Regional Collaboration on New Ideas
- Evaluation of Both Projects and Future Process for New Sources

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Requested **Recommendations**

- Recognition that Surface Impoundments Are Viable Projects and Should Be Elevated on the List of Alternative Sources
 - Cranstons Mill Pond Should be Specifically Included
- Support Role of Private Sector
- Consider Possible Regulatory Changes in Support of Project Development
 - Determination of Need
- Request that Alternative Management Structure Subcommittee Consider Actions that Improve Ability to Forming Partnerships
 - contracts and concessions
 - build-operate-and-transfer (BOTs) arrangements
 - public-private joint ventures

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